

## CLAIMS

- [1] A Stirling engine including a displacer that moves working gas between a compression space and an expansion space and a piston that is made to reciprocate inside a cylinder by a driving force source, the piston reciprocating to cause the displacer to reciprocate to cause the working gas to move,  
wherein a spring for causing the piston to resonate is eliminated.
- [2] The Stirling engine of claim 1,  
wherein a gas bearing is formed between an outer circumferential face of the piston and an inner circumferential face of the cylinder, and two or more of the gas bearing are arranged at an interval from one another along an axis of the piston.
- [3] The Stirling engine of claim 1,  
wherein rotation preventing means is provided for preventing the piston from rotating about an axis thereof inside the cylinder.
- [4] The Stirling engine of claim 1,  
wherein movement restricting means is provided for limiting a range within which the piston can reciprocate.
- [5] The Stirling engine of claim 4,  
wherein an elastic member for damping shock is arranged between the piston and the movement restricting means.

- [6]       The Stirling engine of one of claims 1 to 4,  
          wherein a linear motor is used as the driving force source.